

PROCEEDINGS OF THE NEW YORK ENTOMOLOGICAL SOCIETY

MEETING OF JANUARY 7, 1947

A regular meeting of the New York Entomological Society was held January 7, 1947, in the American Museum of Natural History. President Stanley W. Bromley was in the chair. Fourteen members and six guests were present.

The Nominating Committee's recommendation for the officers for 1947 were read by Mr. Teale as follows and all nominees were elected.

President	Dr. Harold R. Hagan
Vice-President	Dr. T. C. Schneirla
Secretary	Frank A. Soraci
Assistant Secretary	Lina Sordillo
Treasurer	Dr. James C. King
Assistant Treasurer	Leonard J. Sanford
Editor	Harry B. Weiss
Trustees:	Dr. Harold R. Hagan
	William P. Comstock
	Dr. Stanley W. Bromley
	Dr. T. C. Schneirla
	E. I. Huntington
Publication Committee:	Harry B. Weiss
	John D. Sherman
	Dr. Charles D. Michener

Dr. Bromley then turned the meeting over to the new president, Dr. Harold R. Hagan.

Dr. Stanley W. Bromley spoke on "The Last Few Years" (illustrated by Kodachrome slides). His paper will be published in the Journal.

LINA SORDILLO, *Secretary*

MEETING OF JANUARY 21, 1947

A regular meeting of the New York Entomological Society was held January 21, 1947, in the American Museum of Natural History.

In the absence of the President, Doctor Hagan, Dr. T. C. Schneirla, Vice-President, was in the chair. Fifteen members and four guests were present.

Doctor Spieth, chairman of the Auditing Committee reported that the books of the society were audited and found to be correct. The report was accepted as read.

Doctor Schneirla appointed Dr. Charles D. Michener, Chairman of a Committee on the Zoological Record. As such, Dr. Michener is soliciting contributions for that publication. He reported that he had collected about

\$85.00 for this purpose and that he is hopeful that additional funds might be subscribed.

Mr. Albert Zerkowitz who was to speak on the topic "Collecting Lepidoptera in Europe" was unable to attend and in his absence, Dr. Schneirla presented a very interesting paper on "The Coming and Passing of Males of the Genus *Eciton*," an abstract of which follows.

Dr. Schneirla's remarks were confined mostly to the species *burchelli*. This is a species of raiding ant, colonies of which are regularly nomadic and statary, raiding for 17 days, then statary for about 20 days. Doctor Schneirla's observations were made on Barro Colorado Island during a four-month period commencing February 7, 1946, in the dry season of 1946. *E. burchelli* is a "swarm" raider, the males of which appear specifically confined to the dry season. As many as 21 colonies of *E. burchelli* and 30 of *E. hamatum* were studied from mid February to late April. Conditions are similar for the column-raiding species *E. hamatum*, except that in this species the males appear about one month later than in *E. burchelli*.

Doctor Schneirla observed that male eggs are laid by the one true queen in each colony and that she lays at least 18,000 to 20,000 eggs during her egg-laying period which occurs regularly every 35 days. It is believed that a given colony has only one male brood per dry season. The eggs are laid during the early statary period. At the time male eggs are laid, worker eggs are not found in the colony. With regard to the behavior relations of the males to the colony, it is believed that the workers are stimulated by the larvæ into raids. When the callow males (about 3,000) emerge from cocoons, large daily raids and nightly nomadic movements of the colony begin. At other times a similar behavior change occurs when callow workers (about 30,000) appear.

The alate males remain within the bivouac during the day. After dusk they are seen around the bivouac. Usually one or more workers cling to the males as they run about in the bivouac vicinity. Some workers are actually carried off in this manner. Each evening many of the alate males fly from the colony, probably for a distance of more than two or three hundred yards. They soon lose their wings and after about 21 days all are gone. It has been observed that the males often respond to raiding trails of colonies other than their own but it is thought that only a few might make their way into their own or those of another colony.

In the discussion that followed his remarks, Doctor Schneirla spoke of the abundance (number and species) of "ant birds" that followed the swarm raiders, taking prey flushed by the ants, but apparently not feeding on the ants themselves.

FRANK A. SORACI, *Secretary*

MEETING OF FEBRUARY 4, 1947

A regular meeting of the New York Entomological Society was held February 4, 1947, in the American Museum of Natural History. Ten members and five visitors were present. In the absence of President Hagan and of Vice-President Schneirla, Mr. Soraci, secretary, was in the chair.

The meeting was called to order at 8:15 P.M. Mr. Albro T. Gaul, speaker of the evening, proceeded with his paper on "Recent Observations of Vespine Wasps."

Mr. Gaul described the seven distinct forms commonly found in a colony, and related his interesting experiences in transplanting a colony of *Vespula*

squamosum from Mr. Edwin Way Teale's grounds at Baldwin, L. I., to his own home in Brooklyn. This colony, found in 1945 by Mr. Gaul, was the first one reported from New York. Mr. Gaul described the formation of a new nest by this colony, and the build-up in numbers from 90 workers on August 19 to 400 workers on September 9. The colony declined from that point and by October 11, only a few males remained. Mr. Gaul was able to introduce some specimens of *Vespula maculifrons* workers into the colony with no apparent deleterious effects, finding on the contrary that the two species got along very well.

F. A. SORACI, *Secretary*

MEETING OF FEBRUARY 18, 1947

A regular meeting of the New York Entomological Society was held February 18, 1947, in the American Museum of Natural History. Eleven members and four visitors were present. President Harold R. Hagan was in the chair.

Mr. Edwin A. Reddoch, 303 Fourth Avenue, New York City, was proposed for membership.

Dr. James C. King, the speaker of the evening, presented an interesting talk on the topic, "Notes on the Genetics of *Calasymbolus excrucatus*."

The adults of this sphingid moth appear in late June and early July, and it is one brooded in Westchester County, where Doctor King conducted his work. The moths occur commonly on wild cherry, willow, poplar, oak and many other common trees.

From the eggs of one moth taken in July 1943, he found that 75 per cent of the caterpillars molted four times and 25 per cent molted five times. Then 25 per cent of the adults were very yellow-green and 75 per cent were very blue-green. Thus there were two mutant characters appearing in proper, one to three, fashion. However, all 35 adults reared in this trial were females. Since then, Doctor King has reared nine broods, and from 350 pupæ he has obtained only 13 males. Usually only about half of the eggs hatch, and males have been reared only from eggs with a high rate of hatch. From one batch of eggs, 90 per cent of which hatched, 11 males emerged, and two males came from a batch, 61 per cent of which hatched. Doctor King concludes that this moth is not good genetics material. He suspects that three pairs of alleles are concerned with the molting factor, since a ratio of one to seven existed in caterpillars that molted four and five times. With regard to the two color forms, two pairs of alleles are thought to be present. He found that two blue-greens could give some yellow-green progeny, and that two yellow-greens could give some blue-green progeny.

It was concluded that both these phenotypic differences are genetically controlled. Doctor King observed that similar mutations are common in the Sphingidæ, and in the Lepidoptera generally.

F. A. SORACI, *Secretary*

MEETING OF MARCH 4, 1947

A regular meeting of the New York Entomological Society was held March 4, 1947, in the American Museum of Natural History. Nine members and seven visitors were present. President Harold R. Hagan was in the chair.

Mr. Edwin A. Reddoch was elected to membership. Mr. Albro T. Gaul, 401 Washington Avenue, Brooklyn, New York, was proposed for membership.

The following committees were appointed:

Field Committee

Mr. Chris Olsen, Chairman

Miss Lucy Clausen

Program Committee

Mr. Sam Harriot, Chairman

Mr. William P. Comstock

Mr. Albert Zerkowicz, speaker of the evening, presented a talk on "Collecting Lepidoptera in Europe." He spoke of his arrival in the United States in 1941, and of his first catch in his new world. It was *Pieris rapæ*. He gave a brief history of collecting in Europe, mentioning the large European collections that had been established by the middle 1800's. Mr. Zerkowicz had the opportunity to see some of the Linnæus types, and showed pictures of these types which are still in fairly good condition. He spoke of the many collections that had been lost and of the fact that the greatest collection is that of the British Museum.

Mr. Zerkowicz spoke of the thousands of Lepidopterists in Europe and the fact that each of its capitol cities has a Lepidopterological Club. It would seem that preservation of the species rather than control is a problem in many parts of Europe.

The talk was accompanied with a series of beautiful colored slides of places in Europe where the speaker had collected.

F. A. SORACI, *Secretary*

MEETING OF MARCH 18, 1947

A regular meeting of the New York Entomological Society was held March 18, 1947, in the American Museum of Natural History. Sixteen members and eleven visitors were present. President Harold R. Hagan was in the chair.

Mr. Albro T. Gaul was elected to membership.

Mr. Frank A. Soraci, speaker of the evening, presented a talk on "Experiences in Medical Entomology in Japan," touching on his work in Insect Survey and Sanitation, as a member of the Sanitary Corps in the Army of the United States, during the recent war.

F. A. SORACI, *Secretary*

MEETING OF APRIL 1, 1947

A regular meeting of the New York Entomological Society was held April 1, 1947, in the American Museum of Natural History. President Harold R. Hagan called the meeting to order at 8:00 P.M. Twelve members and four visitors were present.

Dr. Theodore L. Jahn, Associate Professor of Zoology, The State University of Iowa, Iowa City, Iowa, was proposed for membership.

Doctor Hagan reported that the Society had need for additional funds and that it was hoped that such funds might be obtained by additions to our present membership.

Mr. William P. Comstock, speaker of the evening, spoke on "Modification of Veins in the Wings of the Genus *Anaea*." This is a genus of butterflies of the family *Nymphalidae*. He has divided the genus, containing over 100 species, into twelve groups on the basis of the structure of the wings. His research leads to the conclusion that the genus *Anaea* is of South American origin and that its extension into Central and North America was subsequent. He does not find at present any justification for the division of this large group of species with its subspecies into separate genera or even subgenera. While the species present very diverse wing structure, genitalia and color patterns, they are all bound together by a number of definite characters in common which separate them from all other butterflies. It is Mr. Comstock's suggestion that this large group had a single origin from some stem from which the genera *Agrias* and *Prepona* may also have been derived. For simplicity of taxonomy the retention of all the *Anaea* species in one genus seems advisable.

F. A. SORACI, *Secretary*

MEETING OF APRIL 15, 1947

A regular meeting of the New York Entomological Society was held April 15, 1947, in the American Museum of Natural History. President Harold R. Hagan was in the chair. Fourteen members and twelve visitors were present.

Dr. Theodore L. Jahn was elected to membership.

Under a suspension of rules Dr. H. Elishewitz of Caracas, Venezuela, was proposed and elected to membership.

Mr. Robert P. Owen of the Bureau of Entomology and Plant Quarantine, Inspection House, 209 River Street, Hoboken, was proposed for membership.

The field committee reported that an outing was planned to the home of Mr. Chris E. Olsen at West Nyack, N. Y., for June 7. The Society voted to accept with thanks Mr. Olsen's kind invitation. It was further reported that a second outing to the home of Edwin Way Teale, on Long Island, would be announced at a later date.

Dr. Mont Cazier, speaker of the evening, then addressed the Society on his army experiences. As a Sanitary Corps officer, during the recent war, he experienced a rather rough trip by water to India, then rougher trips by land across that country, and then by air to China. His talk touched on his

work with *Anopheles phillipinensis* and *Anopheles subpictus*, carriers of human malaria in India, and with *Anopheles hyrcanus sinensis* and *Anopheles minimus* in China. Dr. Cazier also mentioned that non-malaria carrying mosquitoes came in for some attention, although his efforts were concerned primarily in reducing the malaria rate in our troops. His talk was illustrated with some excellent photographs of general interest.

F. A. SORACI, *Secretary*

MEETING OF MAY 6, 1947

A regular meeting of the New York Entomological Society was held May 6, 1947, in the American Museum of Natural History. President Harold R. Hagan was in the chair. Thirteen members and seven visitors were present.

Mr. Robert P. Owen was elected to membership.

Directions for the field trip on June 7, to the home of Mr. Chris Olsen at West Nyack, N. Y., were received and the secretary was instructed to mail these to all members living in the New York City area. He was also instructed to mail out the directions for the later field trip to the home of Mr. Edwin W. Teale, when arrangements have been completed.

Dr. James Forbes, speaker of the evening, talked on "Observations on the Anatomy of Ants." His observations were limited to the carpenter ant, *Camponotus herculeanus pennsylvanicus*, and to the reproductive organs of the male, primarily. Diagrammatic illustrations of the male reproductive system were shown and the unusual form of the various organs evoked considerable discussion.

F. A. SORACI, *Secretary*

MEETING OF MAY 20, 1947

A regular meeting of the New York Entomological Society was held May 20, 1947, in the American Museum of Natural History. President Harold R. Hagan was in the chair. Fourteen members and twelve visitors were present.

Dr. Caryl P. Haskins, speaker of the evening, gave his talk on the subject, "The Ponerine Ants as Subjects for Systematic and Experimental Study." He proceeded with a history of the taxonomy of ants, discussing the basic works of Linnæus, Fabricius, Latreille, and others, then Lubbock's separation of the family Formicidæ into subfamilies, Formicinae, Ponerinae and Myrmecinae was mentioned. Wheeler suspected the colony foundation of the ponerines and under the present classification this subfamily is one of eight subfamilies of the super-family Vespoidea.

Some characteristics of this subfamily are that they have functional and well developed stings and poison glands. The larvæ have well developed mandibles and feed on solid food. Cast distinctions are ill defined. Colonies are in many cases pliometric. In general queen fertility is low and the colonies generally have few individuals. A colony of a thousand individuals is unusual in this subfamily, while some comprise only as few as 12

individuals. All but two species nest in the soil. Of the two exceptions, one nests in wasps nests and the other in epiphytic plants. No ponerines keep or tolerate other species, and none keep aphids. In the subfamily there are no fungus growers or seed sowers and social or internal parasites are practically unknown. Since regurgitation is practically impossible in these insects, the larvæ make their way to the food which is usually just dumped into the nest. Larval exudates are licked up by the nurses. The ponerines are largely confined to the tropics.

Doctor Haskins then showed a series of slides and colored movies. He also had several live colonies on hand which were viewed with interest by the audience.

Following Doctor Haskins' talk, President Hagan mentioned that our next regular meeting would be held on October 7, 1947.

FRANK A. SORACI, *Secretary*